REMARKS

Upon entry of this amendment, Claims 1, 11, 13-15 and 17-20 will be pending in this application. Applicants amend claim 1 and 18-20. No new matter is added.

Applicants thank Examiner Heitbrink for the courtesies extended to Applicants' representative during the personal interview conducted on June 9, 2008. Applicants separate record of the substance of that interview is incorporated into the following remarks.

I. Rejection Under 35 U.S.C. § 103(a)

Claims 1, 11, 13-15 and 17-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Wilson (U.S. Patent 6,558,605) taken together with either Yu et al (U.S. Patent 6,096,088) or Friedl et al (U.S. Patent 6,816,820) in view of Norton (U.S. Patent 6,454,973). Wilson is cited for teaching the timing sequence of injection molding operations by conventional mold filling analyses, software and computer implementation. Yu is cited for disclosing optimum gate locations through simulation analysis designed to predict the location of weld lines and air traps. Such analyses are used to determine mold pressure limits. Friedl et al is cited for determining gate locations and modeling materials of different compositions, simultaneously or sequentially, by way of numerical analysis and computerized designed. Norton is cited for generally disclosing solutions to conventional problems to fill balancing and clamp tonnage, and its teaching of well-known problems overcome by time sequencing valve gates in combination with optimized clamp tonnage.

Applicants traverse the rejection and amend claims 1 and 18-20.

Applicants amend instant claims 1 and 18-20, from which all claims variously depend, to incorporate subject matter from claim 13 (i.e., "*wherein target areas for controlling weld line*

occurrence are divided into a plurality of areas, the quantity of weld line occurrence in each area is weighted, the weighted quantity of weld line occurrence is summed to obtain a weld line evaluation value, and the weld line evaluation value thus obtained is used to induce said weld line occurrence to a specified area or to avoid said weld line occurrence from a specified area."). Such "weighting" of weld line occurrence is useful in simulation and may occur by inputting a weighting factor into an objective function, e.g.,

> [Objective function = A × δ + B], where A is the number of weld lines formed (number of nodes) within a specified area, B (ton) is the mold clamping force required for molding, and δ is the weighting factor (See specification at paragraphs [0022] and [0090] to [0095].)

Single or multiple areas may be targeted for suppressing weld line occurrence. Additionally, the weighted sum in each area can address a plurality of areas having different degrees of importance. Such weighting increases the ability to more finely control weld line generating positions (See id.). The references do not disclose, nor would they have rendered obvious, this combination of features (See, for example, Yu at column 1, lines 23-26, column 2, lines 10-38, and column 13, lines 10-45; see Friedl et al at column 6, lines 23-28; and see Norton at column 1, line 47 to column 2, line 8).

For at least the foregoing reasons, instant claims 1 and 18-20, from which all claims variously depend, are patentable. Reconsideration and withdrawal of the rejection are earnestly solicited.

II. Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the

Office Action feels may be best resolved through a personal or telephone interview, the Office Action is kindly requested to contact the undersigned at the telephone number listed below.

The U.S. Patent and Trademark Office is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

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